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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,953	04/25/2001	Norihiko Nakajima	M1971-90	6208
7590 03/02/2004				
DARBY & DARBY 805 THIRD AVENUE, 27TH FLR. NEW YORK, NY 10022			EXAMINER MARKOFF, ALEXANDER	
			ART UNIT 1746	PAPER NUMBER

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,953

Applicant(s)

NAKAJIMA ET AL.

Examiner

Alexander Markoff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/09/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-5 and 8-9 in Paper filed on 6/26/03 is acknowledged.
2. Claims 6 and 7 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention. Election was made **without** traverse in Paper filed 6/26/03.
3. The new examiner would like to note that the elected claims are directed to two patentably distinct inventions, which could be properly restricted, because the specification clearly state that cleaning with anode water and cleaning with ozone or oxygen water are alternative methods.

No restriction is required this time because the same prior art is applied to both inventions. The applicants are, however, advised that such requirement could be made if the claims would be amended to place a serious burden on the examiner in examination both of the inventions together.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 is indefinite because it is not clear which water (anode water or the water with the claimed resistivity) is referenced as "said water".

This claim is further indefinite because it is not clear which manipulative step or steps are referenced by the term "using".

The specification clearly requires adding the electrolytes to the pure water to stabilize the electrolysis. See page 5, lines 9-23. Thereby the claim was interpreted as comprising the following steps as the first two step of the method: adding an electrolyte to water having resistivity of at least 10 MOhm-cm; producing anode water at an anode side of an electrolysis apparatus from the water to which the electrolytes were added.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2, 3, 5 and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2 contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This is because the pure

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water with such resistivity does not contain the claimed electrolytes with the claimed concentrations. The specification clearly requires adding the electrolytes to the pure water.

According to the specification (page 5, lines 7-23) the water, which is used for electrolysis to produced anode water is either pure water with resistivity of at least 10 MOhm, or the pure water to which electrolytes were added to stabilized electrolysis.

It is believed that claims, 1 and 2 are directed to these two different embodiments respectfully. Thereby it appears that claim 2 could not be properly dependent from claim 1.

Clarification and/or amendment are requested.

Claim 9 contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

This is because the claimed resistivity is disclosed by the specification for the pure water not for the anode water. See at least pages 3 and 5. The anode water comprising ions and oxygen and ozone, produced by the electrolysis, would not have such resistivity.

Further, the specification clearly requires adding the electrolyte to the pure water not to the anode water. See page 5, lines 9-23.

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Claims 3 and 5 contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification clearly states that the pure water, not the pure water with added oxygen or ozone, has the claimed resistivity. The water to which the oxygen or ozone is added would have much lower resistivity.

Claims 3 and 5 are also rejected because the specification fails to provide guidance regarding how the water can contain the claimed amount of oxygen or ozone. The claims recite the concentration in the range from 0.1 ppm to 10,000 ppm. The entire claimed range is not enabled. The maximum concentration of ozone in water is 20-100 ppm depending from the temperature. The saturation point of oxygen in water is about 10 ppm. See US Patents 6,267,125 , 5,35,543 and 5,820,758 as evidence.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsumori et al (US Patent No 5,783, 790).

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Mitsumori et al teach a method as claimed. See entire document, especially figures 1, 3, column 1, column 4, columns 9-13, Tables 3 and 5.

As to claims 4 and 5: glass substrates cleaned by the method of Mitsumori et al would inherently meet the claimed limitations.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 5,599,438, 5,616,221, 5,635,053, 5,676,760, 5,983,909, 6,210, 748 and JP 2000-86301 are cited to show the state of the prior art with respect to cleaning glass and other substrates with electrolyzed water and/or ozone water.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Markoff whose telephone number is 571-272-1304. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alexander Markoff
Primary Examiner
Art Unit 1746

am

ALEXANDER MARKOFF
PRIMARY EXAMINER